construction selector

partitions & walls
ceilings & floors
demountable partitions
roof assemblies

This construction selector summarizes the many effective systems that can be constructed with United States Gypsum quality-tested building products. Complete technical information, organized for efficiency of use, is presented *according to the end result desired by the architect.* It serves as a general guide for initial comparison and selection of systems and as an index to the various system and product folders in this series providing more complete data.

UNITED STATES GYPSUM

9.5/UA

UNITED STATES GYPSUM
1976-1
1 D
SCHEDULES & RECORDS
fire & sound ratings

Contents
U.S.G. technical information

This 24-page Selector is the first element, and the key reference index, in the U.S.G. Architectural Technical Literature series. Following is the sequence of other folders comprising the complete series. Included are Section Numbers for folders located in Sweet's 1976 Architectural File; those marked "O" appear elsewhere in Sweet's files. The numeral before each division title indicates the UCI Uniform System division classification. Copies of all folders listed are available through U.S.G. sales offices or by mail (in Sweet's, see Literature Directory following this Selector).

The System Folders and Building Product Catalogs are arranged in numerical sequence, as listed below. The first numeral in the title number is the appropriate division number (two digits for two-digit division numbers) so that folders are easily filed. All folders are new 1976 editions except those marked (‡) which were new in 1974 or 1975 and not supplied with replacement literature.

(1) Available only as insert in Sweet's.

*Reg. U.S. Pat. & Tm. Off. †T.M. of Vaughan Interior Walls, Inc.

Index
products and systems

References listed are *principal* source of information in U.S.G. Architectural Technical Literature series. Repetition or additional data may occur in other folders.

9.5/Ua

How to use this selector

description of sections

This folder is divided into six sections—A to F—covering the categories indicated below. Within each section are listed brief analyses of major variations of each system, as documented by fire or sound tests, federal specifications or ASTM designations. They are arranged sequentially according to fire ratings —the criterion that most often governs selection.

These analyses are organized to locate the criteria desired at a glance. In Section A, covering fixed and demountable partitions, all information appears under six column headings:

STC rating		physical data construction detail	description & test no.	comments	folder reference
11-f	16-f				

In section B—ceiling systems—headings are revised to show STC and IIC sound ratings. In sections C, D and E—roof assemblies, fireproofing and exterior walls—certain of these columns are not applicable and are omitted.

The analyses applicable to each system, as listed in the first five sections here, are repeated in the individual folder covering that system, indicated by number in the "Folder Reference" column. Full information, details and specifications on the selected constructions also are available in the folders. See contents, page 2, for folder locations.

a partitions—pages 5 to 11—include solid and laminated without studs, metal and wood-framed, fixed and demountable —in plaster and lath, drywall and gypsum tile.

b ceilings—pages 12 to 18—include suspended, furred and direct-attachment types, employing plaster and lath, drywall, and mineral fiber tile or panel surfaces with companion floor or roof construction. Air distribution and integrated environmental systems also are offered.

c roof assemblies—page 19—listed are poured gypsum decks, and the prefabricated gypsum plank type, both available with integral ceilings.

d structural fireproofing—pages 19 to 21—shows basic methods of protecting columns and beams with lath and plaster, gypsum tile and plaster, and gypsum drywall.

e exterior walls and furring—page 22—compares methods of furring exterior walls, including veneer plaster and drywall furring systems, and exterior curtain wall assemblies.

f product catalogs—listed and indexed on page 23—present complete data on components and accessories used in U.S.G. drywall and plaster construction systems. Other subjects: insulation, paint, sound control ceiling products, asphalt roofing, gratings and channel framing, steel doors and frames, metal toilet compartments and screens.

Federal specification and ASTM designation qualifications of U.S.G. products are listed on page 23.

abbreviations

In the test analyses following, the abbreviation "*est*" indicates *estimated;* the abbreviation *N/A* indicates *not applicable* or *not available.* Other abbreviations are classified by columns where they appear:

description and comments

acoust	acoustical	ht	height
alt	alternate	ins	insulating or insulation
alum	aluminum	lamin	laminated
appl	applied	lim	limiting
att	attached	max	maximum
atten	attenuation	met	metal
betw	between	min	mineral or minimum
bd	board	mov	movable
blkts	blankets	nom	nominal
cem	cement	noncomb	noncombustible
chan	channel	o.c.	on center
clg	ceiling	opp	opposite
col	column	oz	ounce
com	common	partn	partition
compd	compound	perim	perimeter
conc	concrete	pl	plaster
constr	construction	plywd	plywood
contin	continuous	prot	protected or protection
corebd	coreboard	qtr	quarter
corrug	corrugated	recom	recommended
cr	cold rolled	reg	regular
ctd	coated	reinf	reinforcement
dbl	double	resil	resilient
dead	deadening	rf	roof
distr	distribution	run	runner(s)
dm	diamond mesh	sep	separate
ea	each	separ	separated
exp	exposed	sf	self furring
fed spec	federal specifications	spec	special
fin	finish or finished	stag	staggered
fireprfg	fireproofing	stl	steel
fixt	fixture	subflr	subfloor
flr	floor	susp	suspended or suspension
formbd	formboard		
freq	frequency	syst	system
fur	furring	thickn	thickness
ga	*gauge*	*unexp*	*unexposed*
galv	galvanized	unfin	unfinished
hex	hexagonal	vert	vertically
hol	hollow	wallbd	wallboard
horiz	horizontally	wd	wood
hr	hour	wf	weight (lbs./sq. ft.)

Plaster mixes show plaster content by weight in lbs., aggregates by volume in cu. ft.

In details, color background designates materials indicated below:

Sound-deadening material, or columns.

Resilient or furring channels.

test no.

noncomb	noncombustible	MLA	Metal Lath Association
Des	Design	NBFU	Natl. Bd. Fire Underwriters
GA	Gypsum Association	ASTM	Amer. Soc. Testing Materials
IBI	Insulation Board Institute	USG	United States Gypsum

The recognized laboratories which performed the tests are noted by abbreviation as follows:

Fire (f)

BMS—National Bureau of Standards
UL—Underwriters Laboratories, Inc.
OSU—Ohio State University
FPRI—Fire Protection Research Institute
U of C—University of California

Sound (s)

NBS—National Bureau of Standards
TL—Riverbank Acoustical Laboratories
G & H—Geiger & Hamme
CK—Cedar Knolls Acoust. Laboratories
WEAL—Western Electro-Acoust. Lab.
BBN—Bolt, Beranek and Newman
KSO—Kenward S. Oliphant
WL—Wyle Laboratories

sound rating

STC sound transmission class

IIC impact insulation class

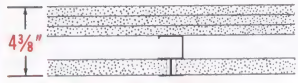
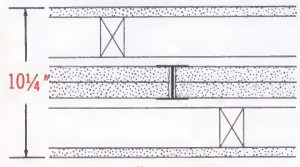
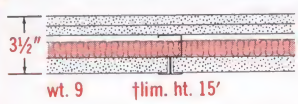
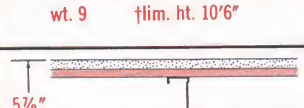
selector guide to sound-rated partitions(1)

STC range	55-60	50-54	45-49	40-44	35-39
drywall assemblies	1, 10, 14, 20, 21, 27, 44, 59	12, 13, 14, 18, 19, 20, 24, 27, 43, 45, 46, 60, 62, 63	14, 16, 17, 18, 22, 28, 46, 47, 48, 52, 54, 55, 58, 59, 60, 63, 64, 65, 66, 68	46, 49, 54, 68, 69	17, 48, 50, 56, 57, 61, 64
plaster assemblies	4	5, 6, 30, 31, 32, 34, 39, 42	31, 34, 35, 36, 37, 39	2, 7, 38	35

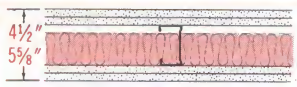
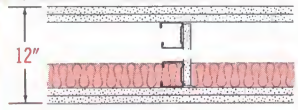
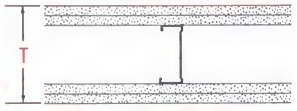
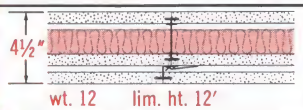
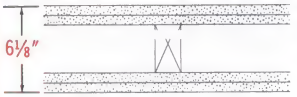
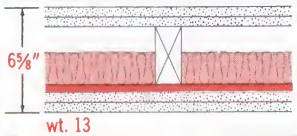
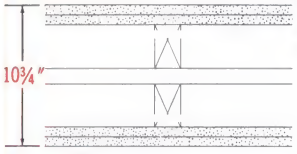
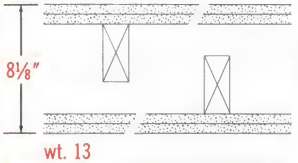
(1) Assemblies identified by numbers in outside margin, pp. 5 to 11.

STC rating 11-f	STC rating 16-f	physical data construction detail	description & test no.	comments	folder reference	
4-hour rated partitions			**VARIOUS ASSEMBLIES**			
	56	6″ wt. 21 lim. ht. 13′	Gypsum Tile & Drywall—⅝″ SHEETROCK FIRECODE "C" gypsum panels—3″ solid PYROBAR—1⅝″ USG met studs 24″ o.c. one side—1½″ THERMAFIBER sound atten blkts betw studs—panels appl vert & screw att to studs—panels strip lamin 16″ o.c. to tile opp side—perim caulked—joints fin—est(f)—TL-72-225 (s)	Excellent sound control for party walls. Extends drywall use to masonry construction	SA-405	1
42		5¼″ wt. 26 lim. ht. 17′	Gypsum Tile & Plaster—4″ hol PYROBAR tile—⅝″ 100:3 gypsum sand plaster—T-118-35&36-OSU (f)—NBS-305 F44 (s)	Fire rating also applies to 6″ hol PYROBAR tile plastered one side only—T-26-1-OSU (f)	SA-405	2
N/A		6¼″ wt. 16 †lim. ht. 15′	Cavity Shaft Wall Gypsum Drywall—2 layers ⅝″ SHEETROCK FIRECODE "C" gypsum panels face side—1″ USG shaft wall liner panels set betw USG stl C-H studs 24″ o.c.—1″ liner panels & ⅝″ gypsum panel core screw att to studs—horiz USG met fur chan 24″ o.c.—face side panels screw att to fur chan—panels appl vert with joints stag—joints fin—est (f)	Estimated fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer plaster surface	SA-922	3
3-hour rated partitions			**PLASTERED MASONRY ASSEMBLIES**			
55(1)	51(2)	6½″ wt. 22.5 lim. ht. 13′	Gypsum Tile & Plaster—3″ hol PYROBAR—2x2 wd fur 16″ o.c. vert—1½″ THERMAFIBER sound atten blkts betw fur—R-5 resil clips att to wd fur—⅜″ ROCKLATH pl base—½″ gypsum sand plaster one side & opp side ⅝″ direct—perimeter caulked—est (f)—(1) USG-123-FT-G&H (s)—(2) Field Test—KSO-1090072-f (s)	Excellent sound & fire resistance. No outlets in 123-FT test; two caulked outlets in field test	SA-405	4
50(1)	47(2)	wt. 27 lim. ht. 17′ 6″ 5″ wt. 24 lim. ht. 13′	Gypsum Tile & Plaster—4″ hol PYROBAR—R-5 resil clips—⅜″ ROCKLATH pl base—½″ gypsum sand plaster one side & opp side ⅝″ direct—perimeter caulked—est (f) —(1) USG-110-FT-G&H (s)—(2) Field Test KSO-1090072-e (s)	Good attenuation. No outlets in 110-FT; two caulked outlets in field test	SA-405	5
52			Gypsum Tile & Plaster—3″ hol PYROBAR—R-5 resil clips—⅜″ ROCKLATH pl base—½″ gypsum sand plaster one side & opp side ⅝″ direct—est (f) TL-60-127 (s)	Excellent fire resistance reduces sound leaks & flanking paths	SA-405	6
40		4¼″ wt. 23 lim. ht. 13′	Gypsum Tile & Plaster—3″ hol PYROBAR—⅝″ 100:3 gypsum sand plaster—T-26-5-OSU (f)—NBS-309 (s)	Fire rating also applies to 3″ solid PYROBAR, unplastered—T26-3-OSU (f)	SA-405	7
N/A		wt. 16 lim. ht. 13′ 4⅝″ 3⅜″ wt. 20 lim. ht. 17′	Gypsum Tile & Plaster—3″ hol PYROBAR—⅝″ 100:3 gypsum sand plaster one side only—T-1315-OSU (f)	Ideal for chase walls, vent & elevator shafts	SA-405	8
N/A			Gypsum Tile & Plaster—4″ hol PYROBAR tile—⅝″ 100:3 gypsum sand plaster one side only—T-118-29&30-OSU (f)		SA-405	9

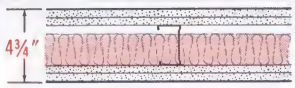
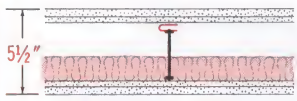
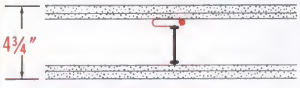
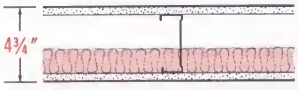
† Based on load of 5 psf; deflection limited to L/240. See System Folder for additional limiting height details.

	STC rating 11-f	STC rating 16-f	physical data construction detail	description & test no.	comments	folder reference
3-hour rated partitions				**DRYWALL METAL-FRAMED ASSEMBLIES**		
10		57	 wt. 12 lim. ht. 11′	Cavity Area Separation Wall—⅝" SHEETROCK W/R FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG stl C-H studs 24" o.c.—RC-1 chan 24" o.c. screw att to side opp liner panels—1½" THERMAFIBER sound atten blkts—single layer panels one side appl vert & screw att—2 layers opp side screw att to chan—base layer appl horiz—face layer appl vert—joints fin—perim caulked—est (f)—BBN-730622 (s)		SA-924
11	N/A		 wt. 12 †lim. ht. 15′	Cavity Shaft Wall Gypsum Drywall—3 layers ⅝" SHEETROCK FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG stl C-H studs 24" o.c.—panels screw att to side opp liner panels with joints stag—base & face layers appl vert—mid layer appl horiz—joints fin—est (f)	Estimated fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer plaster surface	SA-922
2-hour rated partitions				**DRYWALL METAL-FRAMED ASSEMBLIES**		
12		50	 wt. 10 lim. ht. 11′	Cavity Area Separation Wall—½" SHEETROCK W/R FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG stl C-H studs 24" o.c.—RC-1 chan 24" o.c. screw att to side opp liner panels—1½" THERMAFIBER sound atten blkts—single layer panels ea side appl vert & screw att—joints stag on opp sides & fin—perim caulked—est(f)—BBN-750411(s)		SA-924
13		51	 wt. 10 †lim. ht. 13′9"	Cavity Shaft Wall Gypsum Drywall—2 layers ½" SHEETROCK FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG stl C-H studs 24" o.c.—RC-1 chan spaced 24" o.c.—1½" THERMAFIBER sound atten blkts—panels & RC-1 chan screw att to side opp liner panels—base layer appl horiz—face layer appl vert—joints fin—est (f)—BBN-750412 (s)	Estimated fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer plaster surface	SA-922
14	45(1) 54(1) 57(3)		 wt. 16 lim. ht. 10′	Solid Area Separation Wall—⅝" SHEETROCK FIRECODE "C" gypsum panels—two 1" gypsum liner panels set betw USG stl H-studs 24" o.c.—2x3 16" o.c. ea side on 2x3 plates 1" from liner panels—gypsum panels att with 1¼" Type W screws 12" o.c.—joints stag & fin—perim caulked—est (f)—(1) BBN-730104 (s)—(2) BBN-730103 (s)—(3) BBN-730102 (s)	BBN-730103 based on 2" THERMAFIBER sound atten. blkts. in one cavity. BBN-730102 based on 2" insul. blkts. in both cavities	SA-924
15	N/A		 wt. 9 †lim. ht. 15′	Cavity Shaft Wall Gypsum Drywall—½" SHEETROCK FIRECODE "C" gypsum panels—1" USG shaft wall liner panels set betw USG stl C-H studs 24" o.c.—single layer panels ea side appl vert & screw att-joints stag on opp sides & fin—U of C 6-23-75 (f)	Fire rating also applies with IMPERIAL Base and veneer plaster surface	SA-922
16		47	 wt. 9 lim. ht. 11′	Cavity Area Separation Wall—⅝" SHEETROCK W/R FIRECODE "C" gypsum panels—1" USG gypsum liner panels set betw USG stl C-H studs 24" o.c.—single layer panels ea side appl vert & screw att—joints stag on opp side & fin—perim caulked—U of C 6-23-75 (f)—BBN-750706 (s)	BBN-750706 based on 1" THERMAFIBER sound atten. blkts. in cavity	SA-924
17	47(1) 39(2)		 wt. 9 †lim. ht. 15′	Cavity Shaft Wall Gypsum Drywall—2 layers ½" SHEETROCK FIRECODE "C" gypsum panels one side—1" USG shaft wall liner panels set betw USG stl C-H studs 24" o.c.—panels appl vert to side opp liner panels & screw att—joints fin—U of C 3-4-75 (f)—U of C 3-5-75 (f)—(1) BBN-750706 (s)—(2) USG-750302(s)	Fire rating also applies with IMPERIAL Base and veneer plaster surface. BBN-750706 based on same constr. with 1" blankets in cavity	SA-922
18	52(1) 45(2)		 wt. 9 †lim. ht. 10′6"	Stl Stud—2 layers ½" SHEETROCK FIRECODE "C" gypsum panels ea side—2" USG studs 24" o.c.—panels appl vert & screw att—1½" THERMAFIBER sound atten blkts—perim caulked—est (f)—(1) TL-69-159 (s)—(2) TL-69-155 (s)	TL-69-155 based on same construction without blankets	SA-923
19	52(1) 50(2)	52(2)	 wt. 8 †lim. ht. 14′9"	Stl Stud—⅝" SHEETROCK FIRECODE gypsum panels—3⅝" USG studs 24" o.c.—2 layers—base layer ½" USG min fiber sound dead bd ea side screw att—face layer panels lamin & screw att—joints stag & fin—perimeter caulked—est (f)—(1) USG-103-FT-G&H (s)—(2) Field Test KSO-109006-b (s)		SA-923

† Based on load of 5 psf; deflection limited to L/240. See System Folder for additional limiting height details.

STC rating 11-f	STC rating 16-f	physical data construction detail	description & test no.	comments	folder reference	
55(1) 54(2)	54(1) 53(3)	 wt. 10 †lim. ht. 12′ (2½″), 15′6″ (3⅝″)	Stl Stud—2 layers ½″ SHEETROCK FIRECODE "C" gypsum panels ea side—2½″ or 3⅝″ USG studs 24″ o.c.—1″, 1½″ or 2″ THERMAFIBER sound atten blkts stapled—panels appl vert & joints stag—base layer screw att—face layer strip lamin or screw att—joints fin—perimeter caulked—UL Des U412 (f)—(1) Field Test KSO-109006-a (s)—(2) USG-114-FT-G&H (s)—(3) CK-654-40 (s)	Best value of drywall metal stud party walls in 50-54 STC range. CK-654-40 based on screw-attached face layer	SA-923	20
55		 wt. 11 †lim. ht. 12′3″ (24″ lim. width)	Stl Stud Chase Wall—2 layers ½″ SHEETROCK FIRECODE "C" gypsum panels ea side—1⅝″ USG studs 24″ o.c. in 2 rows spaced 6¾″ apart—½″ gypsum panel gussets spanning chase att to studs at qtr points—panels appl vert & screw att—1½″ THERMAFIBER sound atten blkts one side—joints stag & fin—perimeter caulked—est (f)—USG-134-FT-G&H (s).		SA-923	21
46		wt. 11 (T) thickn 5″, 6⅛″ †lim. ht. 12′ (2½″) 15′6″ (3⅝″) 	Stl Stud—2 layers ⅝″ SHEETROCK FIRECODE gypsum panels plain or vinyl faced vert appl ea side—2½″ or 3⅝″ USG studs 24″ o.c.—base layer screw att—face layer lamin or screw att—joints fin or unfin—perimeter caulked—UL Des U411 (f)—TL-60-113 (s)	Excellent for corridors	SA-923	22
N/A		wt. 9 (T) thickn 3⅝″ †lim. ht. 9′3″	Stl Stud—2 layers ½″ SHEETROCK FIRECODE "C" gypsum panels—1⅝″ USG studs 24″ o.c.—2 layers ea side vert appl & screw att—joints fin—U of C 6-15-65 (f)	Most economical 2-hour metal stud drywall partition	SA-923	23
			DRYWALL DEMOUNTABLE ASSEMBLY			
	50	 wt. 12 lim. ht. 12′	Mov ULTRAWALL Partn—concealed "H" studs 24″ o.c.—1½″ THERMAFIBER sound atten blkts—¾″x 24″ bevel edge panels one side—double layer opp side with ¾″ Z-Splines betw layers—joints unfin—perim caulked—painted—UL Des U416(f)—TL-70-198(s)	Ideal choice for maximum sound isolation	SA-1020	24
			DRYWALL WOOD-FRAMED ASSEMBLIES			
N/A		 wt. 12	Wd Stud—2 layers ⅝″ SHEETROCK FIRECODE or W/R FIRECODE "C" gypsum panels—2x4 16″ o.c.—base layer 6d nails 6″ o.c.—face layer lamin or nailed to base—joints fin—UL Des U301 (f)	Basic 2-hour partition construction	SA-924	25
N/A		 wt. 13	Wd Stud—2 layers ⅝″ SHEETROCK FIRECODE "C" gypsum panels ea side—2x4 16″ o.c.—2″ THERMAFIBER sound atten blkts—RC-1 chan one side spaced 24″ o.c.—resil side screw att—opp side nail att—both base layers appl vert and face layers appl horiz—base layers perim caulked—joints fin—T-4799-OSU (f)		SA-924 SA-925	26
	56(1) 51(2)	 wt. 13	Wd Stud—2 layers ⅝″ SHEETROCK FIRECODE "C" gypsum panels—2 rows 2x4 16″ o.c. on sep plates 1″ apart—base layer att with 6d ctd nails 16″ o.c.—face layer att with 7d ctd nails 7″ o.c.—perim caulked—joints fin—est(f)—(1) USG-710120(s)—(2) TL-69-214(s)	USG-710120 based on 3½″ thick blankets in one cavity	SA-924	27
	47	 wt. 13	Stag Wd Stud—2 layers ⅝″ SHEETROCK FIRECODE "C" gypsum panels—2x4 16″ o.c. on 2x6 com plate—base layer att with 6d ctd nails 6″ o.c.—face layer att with 8d ctd nails 8″ o.c.—perim caulked—joints fin—est (f)—TL-69-211 (s)		SA-924	28
			PLASTERED WOOD-FRAMED ASSEMBLY			
N/A		 wt. 12	Wd Stud—2 layers ⅝″ IMPERIAL FIRECODE "C" gypsum base & 1/16″ veneer plaster both sides—2x4 16″ o.c.—base layer 6d nails 6″ o.c.—face layer lamin or nailed to base—joints taped—UL Des U301 (f)	Basic 2-hour partition construction	SA-913	29

† Based on load of 5 psf; deflection limited to L/240. See System Folder for additional limiting height details.

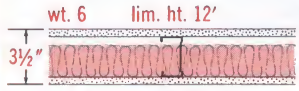
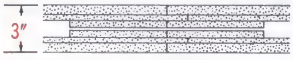
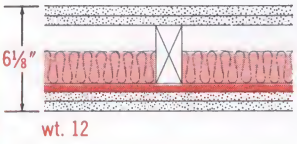
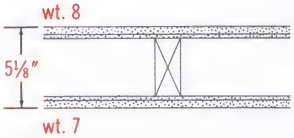
	STC rating 11-f	STC rating 16-f	physical data construction detail	description & test no.	comments	folder reference
2-hour rated partitions				**PLASTERED METAL-FRAMED ASSEMBLIES (continued)**		
30		53	 wt. 10 †lim. ht. 12′	Stl Stud—2 layers ½″ IMPERIAL FIRECODE gypsum base & veneer plaster—2½″ USG studs 24″ o.c.—both layers base appl vert, joints stag & screw att—1⁄16″ IMPERIAL plaster—perimeter caulked—UL Des U303 (f)—CK 654-66 (s)	CK-654-66 based on assembly with 1″ THERMAFIBER sound atten. blankets	SA-912
31		51(1) 47(2)	wt. 12 (T) thickn 5¼″, 6⅜″ †lim. ht. 12′ (2½″), 15′6″ (3⅝″)	Stl Stud—2 layers ⅝″ IMPERIAL FIRECODE gypsum base & veneer plaster—2½″ or 3⅝″ USG studs 24″ o.c.—base layer screw att—face layer lamin or screw att—joints taped—1⁄16″ IMPERIAL plaster—UL Des U411 (f)—(1) TL-75-73 (s)—(2) TL-75-70 (s)	Sound tests based on 2½″ studs. TL-75-70 based on same constr. with 1½″ THERMAFIBER blankets	SA-912
32	52(1) 48(2)	49(2)	 wt. 10 (T) thickn 4¾″, 5⅞″ †lim. ht. 12′ (2½″) 15′6″ (3⅝″)	Stl Stud—2 layers ½″ IMPERIAL FIRECODE "C" gypsum base & veneer plaster—2½″ or 3⅝″ USG studs 24″ o.c.—2″ THERMAFIBER sound atten blkts stapled one side—base appl vert & joints stag—base layer screw att—face layer strip lamin or screw att—joints taped—1⁄16″ IMPERIAL plaster—perimeter caulked—UL Des U412 (f)—(1) USG-127-FT-G&H (s)—(2) Field Test KSO-1090072-a (s)	Sound test based on strip-laminated face layer. Field test includes 2 caulked outlets each side	SA-912
1-hour rated partitions				**PLASTERED MASONRY ASSEMBLY**		
33	N/A		 wt. 11 lim. ht. 13′	Gypsum Tile—3″ hol PYROBAR—unplastered—BMS-92 table 24 (f)	For col. fireprfg., short runs & vent shafts only	SA-405
				PLASTERED METAL-FRAMED ASSEMBLIES		
34	49(1) 47(3)	52(2) 46(3)	 wt. 14 lim. ht. 10′	Stl Stud—Resil Gypsum Lath & Plaster—3¼″ TRUSSTEEL Studs 16″ o.c.—1½″ THERMAFIBER sound atten blkts—TR-1 clips one side & TL-1 clips opp side—⅜″ ROCKLATH—½″ 100:2-100:2 gypsum sand plaster—perimeter caulked—est (f)—(1) USG-125-FT-G&H (s)—(2) CK-664-38 (s)—(3) Field Test KSO-1090072-b (s)	2 caulked outlets on each side in field test	SA-915
35		48(1) 36(2)	 wt. 7 lim. ht. 9′6″	Stl Stud—Resil ½″ IMPERIAL FIRECODE "C" gypsum base & veneer plaster—2½″ TRUSSTEEL studs 24″ o.c.—RC-1 chan both sides spaced 16″ o.c. att with ¾″ Type T pan head screws—base att with 1″ Type S screws—1⁄16″ IMPERIAL plaster—joints taped—T-4831-OSU (f)—(1) TL-69-278 (s)—(2) TL-69-288 (s)	TL-69-278 based on assembly with 1½″ THERMAFIBER sound attenuation blankets	SA-915
36		46	 wt. 12 lim. ht. 10′	Stl Stud—Resil Gypsum Lath & Plaster—2½″ TRUSSTEEL studs 16″ o.c.—TR-1 clips one side & TL-1 clips opp side—⅜″ ROCKLATH—½″ 100:2 gypsum sand plaster—perimeter caulked—est (f)—TL-69-14 (s)		SA-915
37		45	 wt. 8 †lim. ht. 14′9″	Stl Stud—1 layer ½″ IMPERIAL FIRECODE "C" gypsum base & veneer plaster—3⅝″ USG studs—base screw att—1½″ THERMAFIBER sound atten blkts stapled one side—joints stag & taped—1⁄16″ IMPERIAL plaster—perimeter caulked—T-3124-OSU (f)—CK-664-1 (s)	Fire test based on assembly with 2½″ studs, without blkts. Stud spacing at 16″ o.c. recommended	SA-912
38	41		 wt. 13 lim. ht. 15′	Stl Stud—Gypsum Lath & Plaster—2½″ TRUSSTEEL studs 16″ o.c.—⅜″ ROCKLATH—½″ 100:2-100:2 gypsum sand plaster—est (f)—TL-58-7 (s)	Record of proven performance	SA-915
				PLASTERED WOOD-FRAMED ASSEMBLIES		
39	50(2)	49(1)	 wt. 8	Wd Stud—Resil ⅝″ IMPERIAL FIRECODE "C" gypsum base & veneer plaster—2x4 16″ o.c.—3″ THERMAFIBER ins blkts—RC-1 chan one side spaced 24″ o.c.—base att with 1″ Type S screws—opp side att direct with 1¼″ Type W screws—1⁄16″ veneer plaster both sides—perimeter caulked—UL Des U311 (f)—(1) CK-664-4 (s)—(2) USG-111-FT G&H (s)	Good sound isolation combined with highly abrasion-resistant surface. CK-664-4 based on ½″ thick base	SA-913

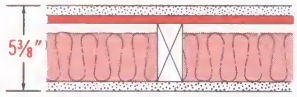
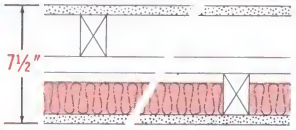
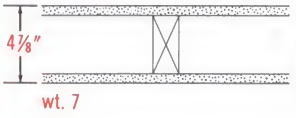
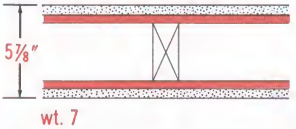
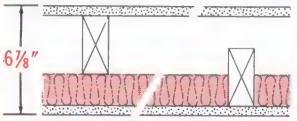
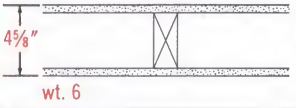
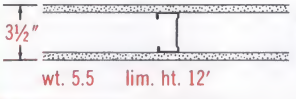
†Based on load of 5 psf and studs 16″ o.c.; deflection limited to L/240. See System Folder for additional limiting height details.

STC rating 11-f	STC rating 16-f	physical data construction detail	description & test no.	comments	folder reference	
N/A		wt. 7 4¾″ 5″ wt. 7	Wd Stud—½″ IMPERIAL FIRECODE "C" gypsum base att direct & veneer plaster—2x4 16″ o.c.—base nailed 7″ o.c. 6d nails—1/16″ veneer plaster—joints taped—U of C 10-27-64 (f)	Excellent surface hardness and abrasion resistance	SA-913	40
N/A			Wd Stud—⅝″ IMPERIAL FIRECODE "C" gypsum base & veneer plaster—2x4 16″ o.c.—base nailed 7″ o.c. 1⅞″ cem ctd nails—1/16″ veneer plaster both sides—joints taped—UL Des U305 (f)		SA-913	41
	53	6⅛″ wt. 11	Wd Stud—Resil ⅝″ IMPERIAL gypsum base & veneer plaster—2x4 16″ o.c.—2 layer base one side screw att & lamin—single layer opp side screw att to RC-1 chan spaced 24″ o.c.—3″ THERMAFIBER ins blkts—1/16″ veneer plaster both sides—perimeter caulked—est (f)—CK-654-38 (s)		SA-913	42
			DRYWALL METAL-FRAMED ASSEMBLIES			
	53	3⅝″ wt. 9 †lim. ht. 9′3″	Stl Stud—2 layers ½″ SHEETROCK gypsum panels ea side—1⅝″ USG studs 24″ o.c.—panels appl vert & screw att—joints stag & fin—perimeter caulked—U of C 9-21-64 (f)—CK-654-40 (s)	Sound test based on 2½″ studs & 1½″ sound atten. blankets in cavity	SA-923	43
	55(1) 53(2)	4¼″ wt. 7 †lim. ht. 12′	Stl Stud—⅝″ SHEETROCK FIRECODE gypsum panels—2½″ USG studs 24″ o.c.—1½″ THERMAFIBER sound atten blkts—2 layer—base layer ¼″ SHEETROCK panels screw att—⅝″ face layer screw att—joints fin—perimeter caulked—est (f)—(1) CK-684-14 (s)—(2) CK-684-13 (s)	CK-684-13 based on ½″ thick panels	SA-923	44
	50	5½″ wt. 8 †lim. ht. 14′9″	Stl Stud—⅝″ SHEETROCK FIRECODE "C" gypsum panels—3⅝″ USG studs 24″ o.c.—single layer panels one side appl vert & screw att—2″ THERMAFIBER sound atten blkts one side—2 layers opp side—panels appl vert & screw att—joints stag & fin—perim caulked—est (f)—USG-241-ST-G&H (s)		SA-923	45
	50(1) 49(2) 41(3) 51(4)	4″ wt. 7 †lim. ht. 11′6″	Stl Stud—½″ SHEETROCK FIRECODE "C" gypsum panels—2½″ USG studs 24″ o.c.—single layer panels one side appl vert & screw att—1½″ THERMAFIBER sound atten blkts one side—2 layers opp side—panels appl vert & screw att—joints stag & fin—perimeter caulked—est (f)—(1) BBN-711005 (s)—(2) TL-69-153 (s)—(3) TL-69-148 (s)—(4) BBN-700726 (s)	BBN-711005 based on lamin. face layer. TL-69-148 based on same construction without blkts. BBN-70026 based on 2⅝″ thick foil-faced blankets	SA-923	46
	47(1) 45(2)	wt. 5 †lim. ht. 11′6″ 3½″ 4″ wt. 5 †lim. ht. 13′	Stl Stud—½″ SHEETROCK FIRECODE "C" gypsum panels—2½″ USG studs 24″ o.c.—single layer panels ea side appl vert & screw att—1½″ THERMAFIBER sound atten blkts one side—joints fin—perimeter caulked—T-3362-OSU (f)—(1) TL-65-158 (s)—(2) TL-69-42 (s)	TL-65-158 based on 3⅝″ studs & 1″ blankets	SA-923	47
	45(1) 39(2)		Stl Stud—½″ SHEETROCK FIRECODE "C" gypsum panels—3″ USG studs 24″ o.c.—single layer panels vert appl & screw att—1½″ THERMAFIBER sound atten blkts—joints fin—perimeter caulked—est (f)—(1) BBN-710310 (s)—(2) BBN-710305 (s)	BBN-710305 based on same construction without blankets	SA-923	48
42		wt. 6 †lim. ht. 14′9″ 4⅞″ 2⅛″ wt. 5 †lim. ht. 8′9″	Stl Stud—⅝″ SHEETROCK FIRECODE gypsum panels—3⅝″ USG studs 24″ o.c.—single layer panels vert or horiz appl & screw att 12″ o.c.—joints fin—perimeter caulked—T-1174-OSU (f)—GA-WP-45-1 hr (f)—USG-17-FT-G&H (s)	Basic 1-hr. corridor—fire tests based on screws 8″ o.c. at vert. joints—WP-45 based on horiz. application	SA-923	49
38			Stl Stud—⅝″ SHEETROCK FIRECODE gypsum panels—1⅝″ USG studs 24″ o.c.—single layer panels vert appl & screw att 12″ o.c.—joints fin—perimeter caulked—U of C 7-31-62 (f) TL-64-29 (s)	Min. 1-hr. drywall partn.—fire test based on screws 8″ o.c. at vertical joints	SA-923	50
N/A		3⅛″ wt. 8 †lim. ht. 13′6″	Cavity Shaft Wall Gypsum Drywall—⅝″ SHEETROCK FIRECODE "C" gypsum panels one side—1″ USG shaft wall liner panels set betw USG stl C-H studs 24″ o.c.—panels appl to side opp liner panels & screw att—joints fin—U of C 3-6-75 (f)—U of C 3-7-75 (f)	Fire rating also applies with IMPERIAL FIRECODE "C" Base and veneer plaster surface	SA-922	51

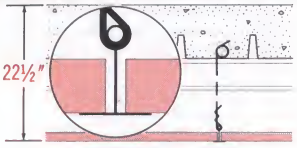
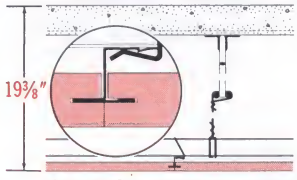
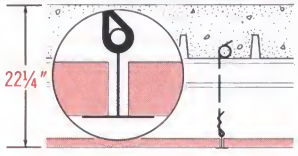
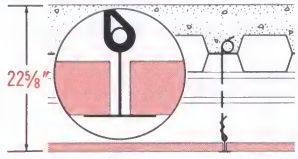
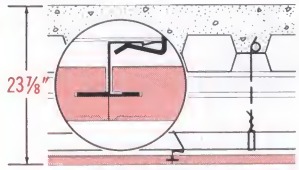
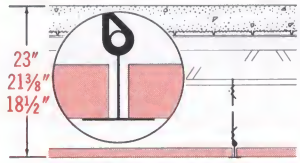
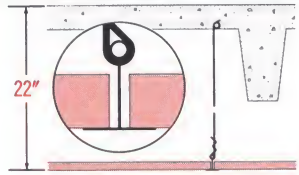
† Based on load of 5 psf; deflection limited to L/240. See System Folder for additional limiting height details.

1-hour rated partitions

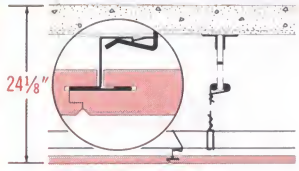
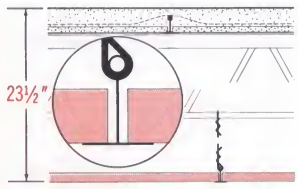
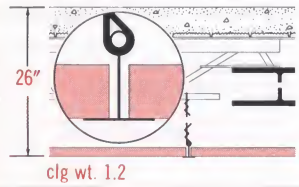
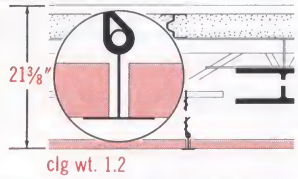
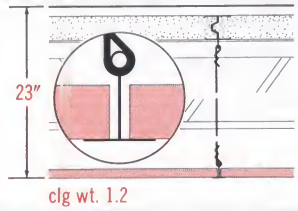
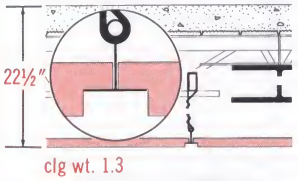
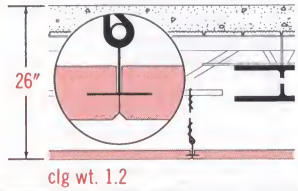
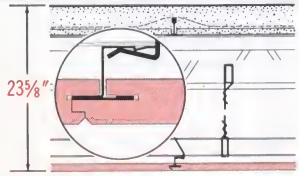
	STC rating 11-f	STC rating 16-f	physical data construction detail	description & test no.	comments	folder reference
				DRYWALL DEMOUNTABLE ASSEMBLIES		
52	49			Mov Demountable Partn—½″ vinyl faced TEXTONE FIRECODE "C" gypsum panels & battens screw att—2½″ USG met studs 24″ o.c.—2″ THERMAFIBER sound atten blkts—UL Des U406 (f)—TL-63-127 (s)	Low cost—only metal stud movable partn. with high sound & fire rating	SA-1030
53	N/A			Mov Demountable Partn—½″ SHEETROCK FIRECODE "C" gypsum panels & battens 48″ o.c.—panels screw att at joints & adhesively att to alt studs—2½″ USG met studs 24″ o.c.—2″ THERMAFIBER sound atten blkts—U of C 7-27-70 (f)		SA-1030
54		42(1) 47(2)		Mov ULTRAWALL Partn—concealed "H" studs 24″ or 30″ o.c.—¾″x24″ or 30″ bevel edge ULTRAWALL gypsum panels—joints unfin—U of C 8-18-67 (f)—U of C 7-23-69(f)—(1)BBN-701008(s)—(2)BBN-701216(s)	Variety of style combinations. BBN-701216 based on same construction with 1″ sound atten. blankets	SA-1020
55		45		Mov VAUGHAN WALLS pre-chased sound wall—spec ⅝″ USG gypsum face panels lamin to ⅜″ gypsum base layer panels—½″ gypsum core strips placed to form panel joints—2 rows 1½″ thick—alum trim—U of C 8-12-68 (f)—WEAL 67-131 (s)	Tenant wall with excellent space-saving features	SA-1040
56		37		Mov VAUGHAN WALLS pre-chased partn—spec ⅝″ USG gypsum face panels lamin to spec 1″ gypsum core strips placed to form panel joints—U of C 11-1-66 (f)—WL-73-59160 (s)	Aluminum ceiling and floor runners. Excellent corridor or tenant partition	SA-1040
				DRYWALL LAMINATED ASSEMBLIES		
57		37		VAUGHAN WALLS chase wall fixed partn—⅝″ SHEETROCK gypsum face panels lamin to spec 1″ gypsum core strips at vert joints—U of C 8-6-71 (f)—WL-73-59160 (s)		SA-1040
58		45		VAUGHAN WALLS sound wall fixed partn—two rows ⅝″ SHEETROCK gypsum face panels lamin & stapled to spec 1″ gypsum core strips at vert joints—neoprene isolators & 1″ insul blkts in cavity—est (f)—WEAL 72-148 (s)		SA-1040
				DRYWALL WOOD-FRAMED ASSEMBLIES		
59		59(1) 49(2)		Wd Stud—2 layers ½″ SHEETROCK FIRECODE "C" gypsum panels ea side—2x4 16″ o.c.—3″ THERMAFIBER ins blkts—RC-1 chan one side spaced 24″ o.c.—resil side screw att—opp side nail att—both base layers appl vert and face layers appl horiz—base layers perim caulked—joints fin—est (f)—(1) TL-67-239 (s)—(2) TL-67-212 (s)	Excellent sound control for party walls. TL-67-212 based on same construction without blankets	SA-924 SA-925
60		53(1) 45(2)		Wd Stud—½″ SHEETROCK FIRECODE "C" gypsum panels—2x4 16″ o.c.—2 layer—base layer ¼″ SHEETROCK gypsum panels appl vert with 4d ctd nails—½″ panels face layer strip lamin—joints stag & fin—perimeter caulked—est (f)—(1) USG-221-ST-G&H (s)—(2) TL-69-52 (s)	221-ST based on ⅝″ lamin. face layers & 1½″ THERMAFIBER sound atten. blankets	SA-924
61	38			Wd Stud—2 layers ⅜″ SHEETROCK gypsum panels lamin & nailed—2x4 16″ o.c.—joints fin—T-118-48-OSU (f)—TL-57-14 (s)		SA-924

STC rating 11-f	STC rating 16-f	physical data construction detail	description & test no.	comments	folder reference	
52			Wd Stud—Resil ⅝" SHEETROCK FIRECODE "C" gypsum panels—2x4 16" or 24" o.c.—3" THERMAFIBER ins blkts—RC-1 chan one side spaced 24" o.c.—panels att with 1" type S screws—opp side direct att with 1¼" Type W screws—joints fin—perimeter caulked—UL Des U311 (f)—USG-33-FT-G&H (s)	Best value of wood stud drywall party walls	SA-924 SA-925	62
51(1) 49(2)			Stag Wd Stud—⅝" SHEETROCK FIRECODE gypsum panels—2x3 16" o.c.—2x3 plates 1" apart—panels att with 1¼" Type W screws 16" o.c.—2" THERMAFIBER sound atten blkts one side—perim caulked—est (f)—(1) USG-106-FT-G&H (s)—(2) USG-155-FT-G&H (s)	Best value in 50 STC range for this type of party wall. 155-FT based on 2x6 plate	SA-924	63
34(2)	46(1)		Wd Stud—⅝" SHEETROCK FIRECODE or W/R FIRECODE "C" gypsum panels—2x4 16" or 24" o.c.—panels nailed 7" o.c.—1⅞" cem ctd nails—joints fin—perim caulked—UL Des U305 (f)—UL Des U314 (f)—(1) BBN-700725 (s)—(2) USG-30-FT-G&H (s)	UL Des U314 based on 24" stud spacing. BBN test includes 3" insul. blankets. USG-30-FT based on 16" stud spacing	SA-924	64
45			Wd Stud—Resil ⅝" SHEETROCK FIRECODE gypsum panels—2x4 16" o.c.—RC-1 chan both sides spaced horiz 24" o.c. att with 6d nails—panels att with 1" Type S screws—joints fin—perimeter caulked—T-1396-OSU (f)—TL-60-52 (s)	Fully resilient 1-hr. fire-rated party wall	SA-924 SA-925	65
	45		Stag Wd Stud—⅝" SHEETROCK FIRECODE "C" gypsum panels—2x4 16" o.c. on 2x6 com plate—panels att with 6d ctd nails 7" o.c.—2" THERMAFIBER sound atten blkts one side—perim caulked—joints fin—est (f)—TL-69-213 (s)		SA-924	66
45-min. rated partitions			**DRYWALL WOOD-FRAMED ASSEMBLY**			
N/A			Wd Stud—½" SHEETROCK FIRECODE "C" gypsum panels—2x4 16" o.c.—panels nailed 7" o.c.—1⅝" cem ctd nails—joints fin—UL Des U317 (f)		SA-924	67
other partitions			**DRYWALL DEMOUNTABLE ASSEMBLIES**			
	48(1) 40(2)		Mov ULTRAWALL Partn—concealed "T" studs both sides 24" o.c.—¾"x24" bevel edge ULTRAWALL gypsum panels—1½" THERMAFIBER sound atten blkts—joints stag & unfin—perim caulked—N/A (f)—(1) TL-70-251 (s)—(2) TL-70-252 (s)	TL-70-252 based on same construction without blankets	SA-1020	68
42			Mov Demountable Partn—½" vinyl faced TEXTONE FIRECODE gypsum panels & battens screw att—2½" USG met studs 24" o.c.—N/A (f)—TL-63-126 (s)	Same as No. 52 without blkts.—note STC difference	SA-1030	69

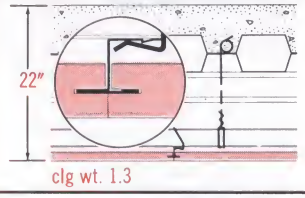
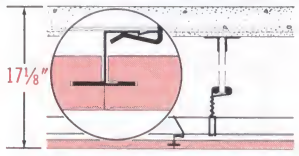
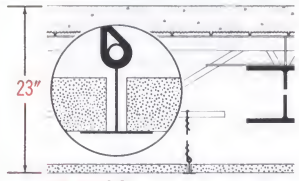
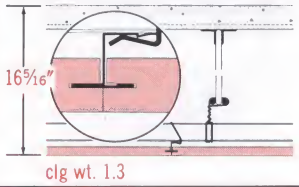
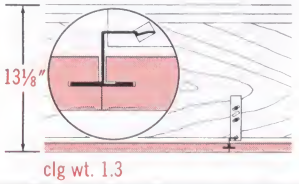
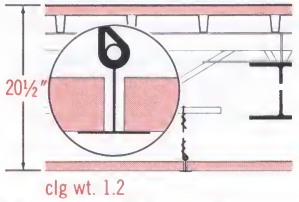
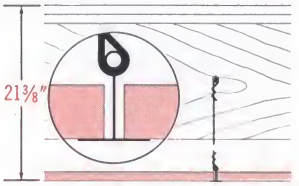
(For fire and sound test data on other partition assemblies, see U.S.G. Technical Bulletins: CS-6 Metal-Framed Metal Lath and Plaster Systems; DW-56 Solid, Semi-Solid, Vent Shaft Partitions.)

	STC rating	physical data construction detail	description & test no.	comments	folder reference
acoustical and air distributing ceilings					
4-hour rated ceilings		MINERAL FIBER SURFACES			
1	40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x24"x48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2½" conc on cellular stl flr—UL Des D206 (f)	Includes 4-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905
3-hour rated ceilings		MINERAL FIBER SURFACES			
2	40 to 44	 clg wt. 1.3	ACOUSTONE 180 ¾"x12"x12" min acoust tile on Concealed Z-Spline Syst—2½" conc deck over bar joist—UL Des G017 (f)		SA-905
3	40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x24"x24" or 24"x48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2¼" conc on cellular stl flr over stl beam—UL Des D207 (f)	Includes 3-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905
4	40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x24"x48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2½" conc on cellular stl flr—UL Des A207 (f)	Includes 4-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905
5	40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ¾"x12"x12" acoust clg tile on Concealed Z-Spline Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2½" conc on cellular stl flr‡—UL Des A009 (f)	Includes 4-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905
2-hour rated ceilings		MINERAL FIBER SURFACES			
6	40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x24"x48" or 24"x24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2½" conc deck on riblath over bar joist—UL Des G211 (f)—UL Des G227 (f)—UL Des G251 (f)	UL Des G227 is Shadow Line System and includes 4-hr. unrestrained beam. UL Des G251 includes only ⅝" x 24" x 48" panels	SA-905
7	40 to 44†	 clg. wt. 1.2	AURATONE FIRECODE ⅝"x24"x48" or 24"x24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2" prestressed conc units with 6" deep stems 48" o.c.‡—UL Des J202 (f)		SA-905

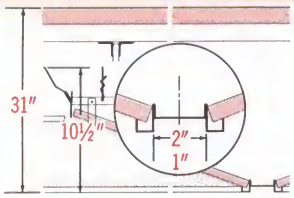
†Based on 11-freq.
‡AIRSON Air Distribution Products may be substituted.

STC rating	physical data construction detail	description & test no.	comments	folder reference	
40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x12"x12" acoust clg tile on Concealed Z-Spline Syst—clg interrupted—light fixt prot by 1¼" min wool bd—2½" conc deck on riblath over bar joist‡—UL Des G019 (f)	See Sound Control Ceilings Folder for STC values of various patterns	SA-905	8
40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x24"x48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2" PYROFILL gypsum conc roof deck with ½" SHEETROCK formbd over bar joist‡—UL Des P207 (f)	See Sound Control Ceilings Folder for STC values of various patterns	SA-305 SA-905	9
40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x24"x24" to 30"x60" or 20"x60" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2½" conc deck on riblath over bar joist‡—UL Des G231 (f)	Broad fire rating approval permits up to 30"x60" panels. Includes 3-hr. unrestrained beam	SA-905	10
49	 clg wt. 1.2	USG Floor Plank and AURATONE FIRECODE Ceiling Panels—⅝"x24"x48" or 24"x24" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2" USG gypsum flr plank welded to bar joists 48" o.c.—¾" MASTICAL underlayment compd over plank—UL Des G230 (f)—USG-700612 (s)	Includes 2-hr. unrestrained beam. Fire rating also applies with FLO-FILL underlayment compd. or with skim coat of compd. over plank joints	SA-309 SA-905	11
40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x24"x48" acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2" USG met edge gypsum plank over bar joist—UL Des P213 (f)	See Sound Control Ceilings Folder for STC values of various patterns	SA-305 SA-306 SA-905	12
35 to 39	 clg wt. 1.3	ACOUSTONE 120 ¾"x24"x24" min acoust tile on Exp Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2½" conc deck on riblath over bar joist‡—UL Des G228 (f)	Includes 2-hr. unrestrained beam	SA-905	13
40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x12"x12" to 24"x24" acoust clg tile on Concealed Accessible Grid Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2½" conc deck on riblath over bar joist‡—UL Des G008 (f)	Includes 2-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905	14
40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝"x12"x12" acoust clg tile on Concealed Z-Spline Syst—clg interrupted—light fixt prot by 1¼" THERMAFIBER min wool bd—2" THERMOFILL gypsum conc roof deck with ½" SHEETROCK formbd over bar joist‡—UL Des P002 (f)	See Sound Control Ceilings Folder for STC values of various patterns	SA-305 SA-905	15

†Based on 11-freq.
‡AIRSON Air Distribution Products may be substituted.

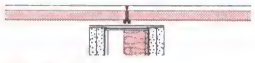
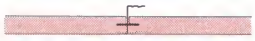
	STC rating	physical data construction detail	description & test no.	comments	folder reference
2-hour rated ceilings			**MINERAL FIBER SURFACES** (continued)		
16	40 to 44	 clg wt. 1.3	ACOUSTONE 120 ¾″x12″x12″ min acoust tile on Concealed Z-Spline Syst—clg interrupted—light fixt prot by 1¼″ THERMAFIBER min wool bd—2½″ conc deck on cellular stl flr‡—UL Des A010 (f)	Includes 1½-hr. unrestrained beam	SA-905
17	40 to 44	 clg wt. 1.3	ACOUSTONE 120 ¾″x12″x12″ min acoust tile on Concealed Z-Spline Syst—2½″ conc deck on riblath over bar joist—UL Des G018 (f)		SA-905
18	N/A	 clg wt. 2.0	FIRECODE ½″x24″x24″ Gypsum Panels on Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼″ THERMAFIBER min wool bd—2½″ conc deck on riblath over bar joist—UL Des G222 (f)	Includes 2-hr. unrestrained beam	SA-905
1½-hour rated ceilings			**MINERAL FIBER SURFACES**		
19	30 to 34	 clg wt. 1.3	ACOUSTONE 90 ¾″x12″x12″ min acoust tile on Concealed Z-Spline Syst—2″ conc deck on riblath over bar joist—UL Des G020 (f)		SA-905
1-hour rated ceilings			**MINERAL FIBER SURFACES**		
20	30 to 34	 clg wt. 1.3	ACOUSTONE 90 ¾″x12″x12″ min acoust tile on Concealed Z-Spline Syst—1″ nom plywd & MASTICAL underlayment compd or wd sub & fin floor over wd joist 16″ o.c.—UL Des L003 (f)		SA-905
21	40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝″x24″x48″ acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼″ THERMAFIBER min wool bd—1½″ stl roof deck & 1″ noncomb insul over bar joist—UL Des P214 (f)	Includes 1-hr. unrestrained beam. See Sound Control Ceilings Folder for STC values of various patterns	SA-905
22	40 to 44†	 clg wt. 1.2	AURATONE FIRECODE ⅝″x24″x48″ or 24″x24″ acoust clg panels in Susp Exp Grid Syst—clg interrupted—light fixt prot by 1¼″ THERMAFIBER min wool bd—1″ nom plywd & MASTICAL underlayment compd or wd sub & fin flr over 2x10 wd joist—UL Des L206 (f)	See Sound Control Ceilings Folder for STC values of various patterns	SA-905

†Based on 11-freq.
‡AIRSON Air Distribution Products may be substituted.

STC rating	physical data construction detail	description & test no.	comments	folder reference	
43	 clg. wt. 2.5	MOD V Ceiling System—AURATONE FIRECODE ⅝″ acoust clg panels and 2′x4′ light fixt on MOD Grid Syst—60″x60″ module—1½″ stl roof deck & 1⁵⁄₁₆″ noncomb insul over bar joist—UL Des P222(f)—USG-237-FT-G&H (s)	Vaulted integrated environmental ceiling continuous over partition. Sound atten. test based on grid system with 2″ regress	SA-907	23

noncombustible ceilings

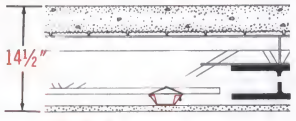
MINERAL FIBER SURFACES

40	 clg. wt. 1.5	DELTA Ceiling System—ACOUSTONE Foil-Backed Glacier ¾″x24″x24″ acoust clg panels in DELTA Grid Syst—clg contin over partn—ASTM E84 (f)—USG-240-FT-G&H (s)	Sound atten. test for integrated environmental ceiling	SA-907	24
40 to 44	 clg wt. 1.3	ACOUSTONE "F" Foil-Backed ¾″x12″x24″ or 12″x36″ min acoust tile on 1-Way Exp Grid Syst—ASTM E84(f)	One-way exposed grid system for accessibility	SA-905	25
40 to 44	 clg wt. 1.3	ACOUSTONE Foil-Backed Fissured or Glacier ¾″x 12″x12″ min acoust tile on concealed 100% Accessible direct-hung Susp Syst—ASTM E84(f)	Basic direct-hung concealed accessible system	SA-905	26
30 to 34		ACOUSTONE "F" ¾″x12″x12″ or 12″x24″ min acoust tile on Concealed Z-Spline Syst‡—ASTM E84 (f)	Basic concealed spline acoustical tile system; STC estimated	SA-905	27
40 to 44	 clg wt. 1.0	AURATONE ⅝″ or ¾″x24″x24″ or 24″x48″ acoust clg panels in Susp Exposed Grid Syst‡—ASTM E84 (f)	Basic noncombustible lay-in panels; NRC varies with pattern	SA-905	28
44(1) 48(2)	 clg wt. 1.5	AURATONE ⅝″x24″x48″ acoust clg panels in Susp ExpGridSyst—continoverpartn—1½″ THERMAFIBER sound atten blkts over clg—ASTM E84 (f)—(1) USG-210-FT-G&H (s)—(2) USG-211-FT-G&H (s)	Test USG-211-FT includes double-layer blankets extending 4′ both sides of partition	SA-905	29
N/A	 clg wt. 1.2	AIRSON Grid Air Distr Syst—Exposed AIRFLO grid systems for noncomb acoust panels—adjustable air distr through grid itself—ASTM E84 (f)	Basic steel or alum. grid with unslotted panels	SA-905	30

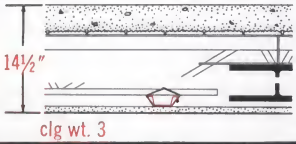
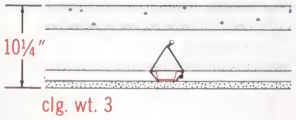
gypsum drywall and plaster ceilings

3-hour rated ceilings

PLASTERED ASSEMBLY

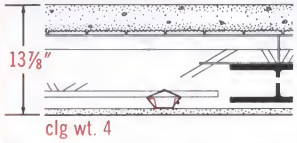
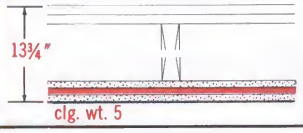
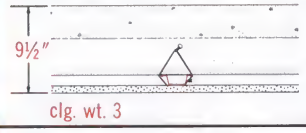
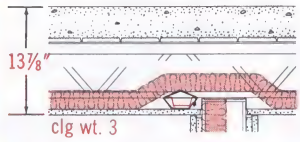
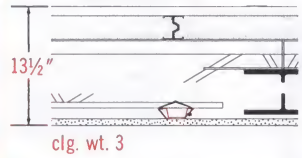
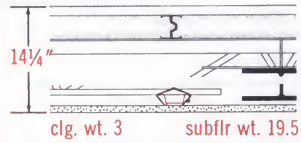
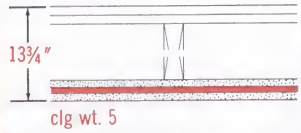
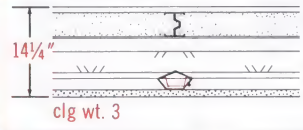
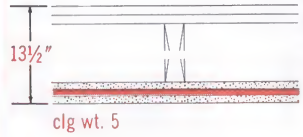
N/A	 clg wt. 4	⅝″ IMPERIAL FIRECODE "C" gypsum base & veneer plaster ceiling—USG met fur chan—base att with 1″ Type S screws 12″ o.c.—joints exp or taped—⁵⁄₁₆″ IMPERIAL plaster—3″ conc on riblath over bar joist—UL Des G512 (f)	Includes 3-hr. unrestrained beam. Spacing of furring channel at 16″ o.c. recommended	SA-912	31

GYPSUM DRYWALL SURFACES

N/A	 clg wt. 3	⅝″ SHEETROCK FIRECODE "C" gypsum panels—USG met fur chan 24″ o.c.—panels att with 1″ Type S screws 12″ o.c.—joints exp or fin—3″ conc on riblath over bar joist—UL Des G512 (f)	Includes 3-hr. unrestrained beam	SA-923	32
N/A	 clg. wt. 3	⅝″ SHEETROCK FIRECODE "C" gypsum panels—USG met fur chan 24″ o.c.—panels att with 1″ Type S screws 12″ o.c. in field and 8″ o.c. at ends—joints fin—prestressed conc units with 6″ deep stems 48″ o.c.—UL Des J502 (f)—UL Des J503 (f)—UL Des J504 (f)	Rating based on 2¾″ thick reg. or 2½″ lightwt. concrete slab	SA-923	33

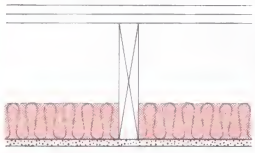
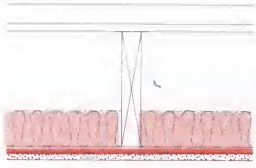
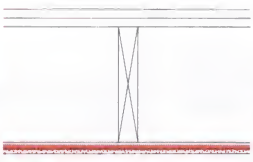
†Based on 11-freq.
‡AIRSON Air Distribution Products may be substituted.

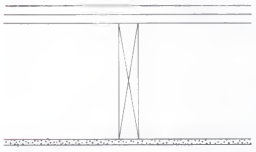
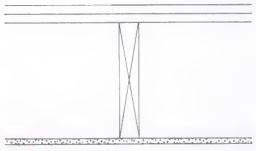
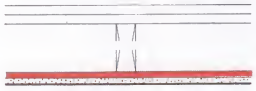
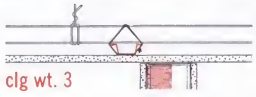
b ceilings

	sound rating STC	sound rating IIC	physical data construction detail	description & test no.	comments	folder reference
2-hour rated ceilings				**PLASTERED ASSEMBLIES**		
34	N/A			½" IMPERIAL FIRECODE "C" gypsum base & veneer plaster ceiling furred or susp—USG met fur chan—base att with screws 12" o.c.—joints taped —1/16" IMPERIAL plaster—2½" conc on riblath or corrug stl deck over bar joist—UL Des G515 (f)	Includes 2-hr. unrestrained beam. Spacing of furring channel at 16" o.c. recommended	SA-912
35	50 est			Resil 2 layers ⅝" IMPERIAL FIRECODE "C" gypsum base & veneer plaster ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—RC-1 chan screw att over base layer—face layer screw att to chan 12" o.c.—1/16" veneer plaster—joints taped—UL Des L511 (f)		SA-913
				GYPSUM DRYWALL SURFACES		
36	N/A			⅝" SHEETROCK FIRECODE "C" gypsum panels—USG met fur chan 24" o.c.—panels att with 1" Type S screws 12" o.c. in field and 8" o.c. at ends—joints fin—prestressed conc units with 6" deep stems 48" o.c.—UL Des J502 (f)—UL Des J503 (f)	Rating based on 2" thick reg. or lightwt. concrete slab	SA-923
37	54			½" SHEETROCK FIRECODE "C" gypsum panels—furred or susp—USG met fur chan 24" o.c.—panels att with 1" Type S screws 12" o.c.—joints exp or fin —2½" conc on riblath or corrug stl deck over bar joist—UL Des G515 (f)—USG-189-FT-G&H (s)	Includes 2-hr. unrestrained beam. STC based on furred interrupted clg., 1½" sound atten. blankets extendg. 4' beyond partn.	SA-923
38	51(1)	32(1) 61(2)		USG Floor Plank System—(1) ⅛" vinyl flr tile (2) 39-oz carpet & 40-oz pad—2" gypsum flr plank welded to bar joists 48" o.c.—skim-coat MASTICAL underlayment or DURABOND 90 compd over plank joints—USG met fur chan 24" o.c. wire-tied to joists —⅝" SHEETROCK FIRECODE "C" gypsum panels screw-att 12" o.c.—joints fin—UL Des G516 (f)—(1) BBN-720317(s)—(1) BBN-720316(s)—(2) BBN-720314(s)		SA-309 SA-923
39	54(1)	37(1) 64(2)		USG Floor Plank System—¾" MASTICAL underlayment compd—(1) ⅛" vinyl flr tile (2) 39-oz carpet & 40-oz pad—2" USG gypsum flr plank welded to bar joists 48" o.c.—USG met fur chan 24" o.c. wire-tied to joists—⅝" SHEETROCK FIRECODE "C" gypsum panels screw-att 12" o.c.—joints fin—UL Des G516 (f) —(1) BBN-720506 (s)—(1) BBN-720507 (s)—(2) BBN-720509 (s)	Fire rating also applies with FLO-FILL underlayment compd; sound ratings are comparable	SA-309
40	50 est			Resil 2 layers ⅝" SHEETROCK FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c. screw att over base layer panels—face layer screw att to chan 12" o.c.—joints fin—UL Des L511 (f)		SA-924 SA-925
41	N/A			⅝" SHEETROCK FIRECODE "C" gypsum panels—USG met fur chan 24" o.c.—panels att with Type S screws 12" o.c.—joints exp or fin—2" USG met edge gypsum plank over bar joist—UL Des P501 (f)		SA-305 SA-306
1½-hr. rated ceilings				**GYPSUM DRYWALL SURFACES**		
42	50 est			Resil 2 layers ½" SHEETROCK FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c. screw att over base layer panels—face layer screw att to chan 12" o.c.—joints fin—UL Des L510 (f)	Fire rating also applies with IMPERIAL Gypsum Base and veneer plaster surface	SA-924

1-hour rated ceilings

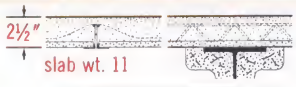
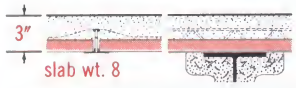
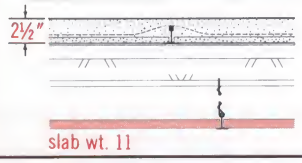
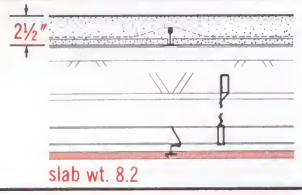
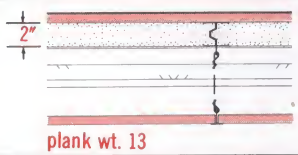
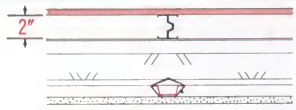
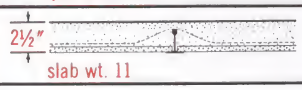
GYPSUM DRYWALL SURFACES

sound rating STC	sound rating IIC	physical data construction detail	description & test no.	comments	folder reference	
41(1) 40(2)	32(1) 58(2)	 clg wt. 3	⅝" SHEETROCK gypsum panel ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—3" THERMAFIBER ins blkts betw joists—panels att with 6d nails 6" o.c.—joints fin—est (f)—(1) CK-6412-6 (s)—(2) CK-6412-5 (s)	In CK-6412-5 test, 44-oz. carpet & 40-oz. pad added atop flooring	SA-924	43
59(1)	47(1) 65(2)		Resil ½" SHEETROCK FIRECODE "C" gypsum panel ceiling—¾" FLO-FILL underlayment compd—⅝" plywd subflr—(1) ⅛" vinyl flr tile (2) 66-oz carpet & 40-oz pad—2x10 wd joist 16" o.c.—3" THERMAFIBER ins blkts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—(1) USG-740704 (s)—(1) USG-740703 (s)—(2) USG-740705 (s)		SA-924	44
55(1)	52(1) 64(2)	 clg wt. 3	Resil ½" SHEETROCK FIRECODE "C" gypsum panel ceiling—¾" PYROROCK underlayment bd over ⅝" plywd subflr—(1) ⅛" vinyl flr tile (2) 66-oz carpet & 40-oz pad—2x10 wd joist 16" o.c.—3" THERMAFIBER ins blkts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—(1) BBN-720503 (s)—(1) BBN-720502 (s)—(2) BBN-720501 (s)		SA-924	45
56	54		Resil ½" SHEETROCK gypsum panel ceiling—¾" MASTICAL underlayment compd over ⅝" plywd subflr—2x10 wd joist 16" o.c.—3" THERMAFIBER ins blkts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est (f)—BBN-670601 & BBN-670602 (s)		SA-924 SA-925	46
N/A			Resil ⅝" SHEETROCK FIRECODE "C" gypsum panel ceiling—1⅝" perlite-sand conc over ⅝" plywd subflr—2x10 wd joists 16" o.c.—3" glass fiber batts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—UL Des L516 (f)		SA-924	47
54(1)	55(2)		Resil ½" SHEETROCK FIRECODE "C" gypsum panel ceiling—1" nom plywd & MASTICAL or FLO-FILL underlayment compd or wd sub & fin flr—2x10 wd joist 16" o.c.—RC-1 chan spaced 24" o.c.—panels att with 1" Type S screws—joints fin—UL Des L514 (f)—(1) BBN-740407 (s)—(2) BBN-740405 (s)	Sound ratings based on ¾" FLO-FILL and ⅝" plywd subfloor; IIC with carpet & pad	SA-924 SA-925	48
47(1) 47(2)	39(1) 39(2)		Resil SHEETROCK gypsum panel ceiling—1¼" nom wd sub & fin flr—2x10 wd joist 16" o.c.—RC-1 chan screw att to joist—panels att with 1" Type S screws—joints fin—est (f)—(1) CK-6512-6 (s)—(2) CK-6412-10 (s)	CK-6512-6 based on ½" FIRECODE "C" panels; CK-6412-10 based on ⅝" reg. panels	SA-924 SA-925	49
47(1) 48(2)	67(1) 66(2)		Resil SHEETROCK gypsum panel ceiling—1¼" nom wd sub & fin flr—44-oz carpet & 40-oz pad atop flr—2x10 wd joist 16" o.c.—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est (f)—(1) CK-6512-7 (s)—(2) CK-6412-9 (s)	CK-6512-7 based on ½" FIRECODE "C" panels; CK-6412-9 based on ⅝" reg. SHEETROCK panels	SA-924 SA-925	50
51(1) 50(2)	46(1) 46(2)	clg wt. 3	Resil SHEETROCK gypsum panel ceiling—1¼" nom wd sub & fin flr—2x10 wd joist 16" o.c.—3" THERMAFIBER ins blkts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est (f)—(1) CK-6512-9 (s)—(2) CK-6412-3 (s)	CK-6512-9 based on ½" FIRECODE "C" panels; CK-6412-3 based on ⅝" reg. SHEETROCK panels	SA-924 SA-925	51
52(2) 51(2)	71(1) 70(2)		Resil SHEETROCK gypsum panel ceiling—1¼" nom wd sub & fin flr—44-oz carpet & 40-oz pad atop flr—2x10 wd joist 16" o.c.—3" THERMAFIBER ins blkts betw joists—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—est (f)—(1) CK-6512-8 (s)—(2) CK-6412-4 (s)	CK-6512-8 based on ½" FIRECODE "C" panels; CK-6412-4 based on ⅝" reg. panels	SA-924 SA-925	52
49(1)	45(1) 58(2)		Resil ⅝" SHEETROCK FIRECODE "C" gypsum panel ceiling—¾" PYROROCK underlayment bd over ⅝" plywd subflr—(1) ⅛" vinyl flr tile (2) 66-oz carpet & 40-oz pad—2x10 wd joist 16" o.c.—RC-1 chan screw att to joists—panels att with 1" Type S screws—joints fin—UL Des L523 (f)—(1) USG-740307 (s)—(1) USG-740302 (s)—(2) USG-740308 (s)	Fire rating also applies with direct-attached gypsum panel ceiling. Sound ratings based on ½" thick gypsum panels	SA-924 SA-925	53

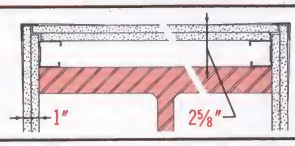
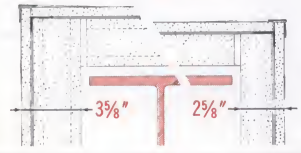
	sound rating STC	sound rating IIC	physical data construction detail	description & test no.	comments	folder reference
1-hour rated ceilings				**GYPSUM DRYWALL SURFACES** (continued)		
54	N/A		 clg wt. 3	⅝" SHEETROCK FIRECODE gypsum panel ceiling—Amer Plywood Assn 2-4-1 flr 4x10 wd joist 48" o.c.—USG met fur chan spaced 24" o.c.—panels att with 1" Type S screws—joints fin—UL Des L508 (f)	Only 1-hr. residential drywall system based on 48" joist spacing	SA-924
55	48	35	 clg wt. 3	½" SHEETROCK FIRECODE "C" gypsum panel ceiling—½" plywd & ¾" MASTICAL or FLO-FILL underlayment compd over subflr—2x10 wd joist 16" o.c.—panels att with 5d cem ctd nails 6" o.c.—joints fin—UL Des L512 (f)—BBN-671007 & 671008 (s)	BBN-671007 & 671008 based on 1¼" thick MASTICAL floor underlayment	SA-924
56	38(1) 39(2)	32(1) 56(2)		⅝" SHEETROCK FIRECODE gypsum panel ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—panels att with 6d nails 6" o.c.—joints fin—UL Des L501 (f)—(1) CK-6412-7 (s)—(2) CK-6412-8 (s)	In CK-6412-8 test, 44-oz. carpet & 40-oz. pad added atop flooring	SA-924
57	36†			½" SHEETROCK FIRECODE "C" gypsum panel ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—panels att with 5d cem ctd nails 6" o.c.—joints fin—UL Des L512 (f)—NBS-77 P-716 (s)	Basic assembly—sound attenuation test	SA-924
				PLASTERED ASSEMBLIES		
58	N/A			½" IMPERIAL FIRECODE "C" gypsum base & veneer plaster ceiling—wd joist 2x10 16" o.c.—1" nom wd sub & fin flr—base att with 5d nails 6" o.c.—1/16" veneer plaster—joints taped—UL Des L512 (f)	Fire rating also applies with ¾" MASTICAL or FLO-FILL underlayment compound over plywood subfloor	SA-913
59	N/A		clg wt. 3	⅝" IMPERIAL FIRECODE gypsum base & veneer plaster ceiling—1" nom wd sub & fin flr—2x10 wd joist 16" o.c.—base att with 6d nails 6" o.c.—1/16" veneer plaster—joints taped—UL Des L501 (f)		SA-913
60	N/A		 clg wt. 3	Resil ½" IMPERIAL FIRECODE "C" gypsum base & veneer plaster ceiling—wd joist 2x10 16" o.c.—1" nom wd sub & fin flr—RC-1 chan spaced 16" o.c. and at end joints—base att with Type S screws 12" o.c.—1/16" veneer plaster—joints taped—UL Des L514 (f)	Fire rating also applies with ¾" MASTICAL or FLO-FILL underlayment compound over plywood subfloor	SA-913
61	N/A		 clg. wt. 3	⅝" IMPERIAL FIRECODE gypsum base & veneer plaster ceiling—Amer Plywood Assn 2-4-1 flr 4x10 wd joist 48" o.c.—USG met fur chan—base att with 6d nails 6" o.c.—1/16" veneer plaster—joints taped—UL Des L508 (f)	Only 1-hr. residential veneer plaster system based on 48" joist spacing	SA-913
noncombustible ceilings				**GYPSUM DRYWALL SURFACES**		
62	45		 clg wt. 3	⅝" SHEETROCK FIRECODE gypsum panels—1½" cr chan 4' o.c.—USG met fur chan 24" o.c.—panels screw att 12" o.c.—joints fin—ASTM E84 (f)—USG-5-FT-G&H (s)	"Up and over" attenuation—suspension & ceiling membrane only	SA-923

†*Based on 11-freq. (See "Roof Assemblies" section, right, for ceilings of finished formboards available as part of integral roof system. Also see U.S.G. Technical Bulletin CS-6 Metal-Framed Metal Lath and Plaster Systems, for other fire-tested ceiling assemblies.)*

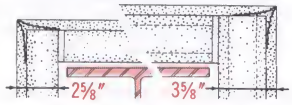
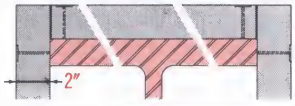
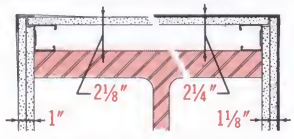
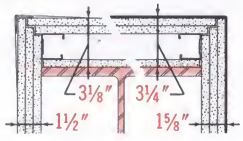
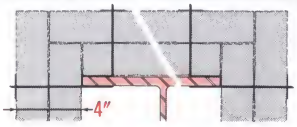
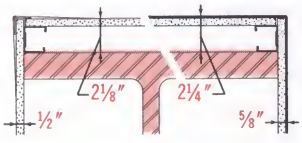
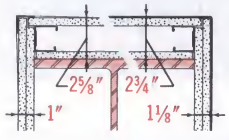
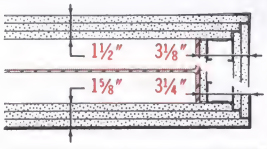
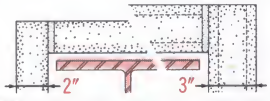
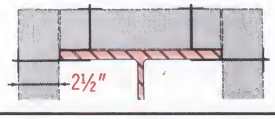
roof assemblies C

fire rating	physical data construction detail	description & test no.	comments	folder reference	
2 hrs. (beam 2 hrs.)		PYROFILL Gypsum Concrete Roof Deck poured 2" min thickn over ½" SHEETROCK or 1" FIRECODE formbd—Keydeck truss tee—Keydeck reinf mesh —UL Des P676 (f)	Protection of primary steel required. Fire rating based on 8' max. beam spacing	SA-305	1
2 hrs. (beam 2 hrs.)		THERMOFILL Gypsum Concrete Roof Deck poured 2" min thickn over 1" to 1½" FIRECODE formbd —Keydeck truss tee—Keydeck reinf mesh—UL Des P677 (f)	Protection of primary steel required. Fire rating based on 7' max. beam spacing	SA-305	2
2 hrs.		PYROFILL Gypsum Concrete Roof Deck poured 2" min thickn over ½" SHEETROCK or 1" FIRECODE formbd—bulb tee on 12" bar joist—susp AURATONE FIRECODE or AIRSON AURATONE FIRECODE acoust clg panels—UL Des P207 (f)	AIRSON Ceiling includes air control valves in panels. Fire rating based on 4' max. joist spacing. Rating also applies with ½" SHEETROCK Formboard on USG sub-purlin	SA-305 SA-905	3
2 hrs.		THERMOFILL Gypsum Concrete Roof Deck poured 2" min thickn over ½" SHEETROCK or 1" FIRECODE formbd—bulb tee on 10" bar joist—susp AURATONE FIRECODE or AIRSON AURATONE FIRECODE acoust clg tile—UL Des P002 (f)	AIRSON Ceiling includes air control valves in tile. Fire rating based on 4' max. joist spacing. Rating also applies with ½" SHEETROCK Formboard on USG sub-purlin	SA-305 SA-905	4
2 hrs.		USG Metal Edge Plank Roof Deck—precast gypsum plank clipped or welded to bar joists spaced 7'0" o.c. —¾" noncomb insul—⅝" AURATONE FIRECODE susp acoust clg panels—UL Des P213 (f)	A good high-strength, long-span dry decking simple to erect	SA-305 SA-306 SA-905	5
2 hrs.		USG Metal Edge Plank Roof Deck—precast gypsum plank clipped or welded to bar joists spaced 4'0" o.c. —¾" noncomb insul—USG met fur chan 24" o.c.—⅝" SHEETROCK FIRECODE "C" gypsum panels screw att 12" o.c.—joints exp or fin—UL Des P501 (f)		SA-305 SA-306	6
noncomb.		PYROFILL or THERMOFILL Gypsum Concrete poured over noncomb formbd—rated noncombustible by NBFU definition—SS-S-118a fed spec	Thickness of fill 2" min.	SA-305	7

structural fireproofing d

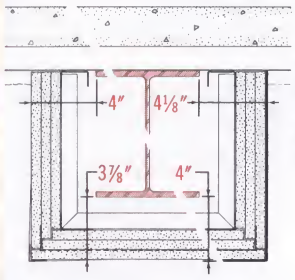
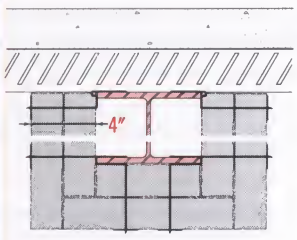
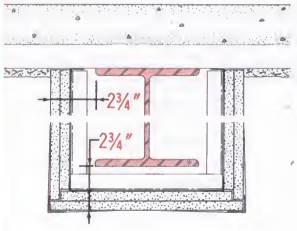
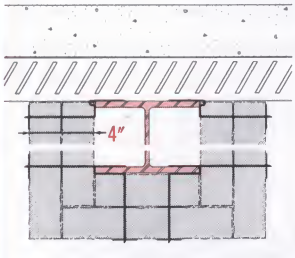
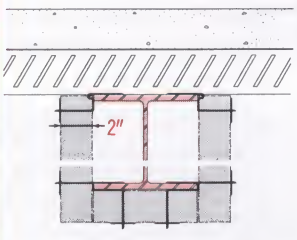
column type	physical data construction detail	description & test no.	comments	folder reference	
column fireproofing		**4-HOUR RATED APPLICATIONS**			
W14 x228		Gypsum Drywall or Veneer Plaster Fireprfg—2 layers ½" SHEETROCK FIRECODE "C" panels or ½" IMPERIAL FIRECODE "C" gypsum base around col—panels screw att to 158ST5 stl studs at corners—met corner beads—joints fin or 1/16" IMPERIAL plaster over base—UL Des X507 (f)		SA-923	1
W10 x49		PYROBAR Gypsum Tile & Drywall or Veneer Plaster Fireprfg—2" solid or 3" hol tile around col—tile banded 24" from ea end—contin met angles screw att to bands—1 layer ⅝" SHEETROCK FIRECODE "C" panels or ⅝" IMPERIAL FIRECODE "C" gypsum base screw att to angles—met corner beads—joints fin or 1/16" IMPERIAL plaster over base—UL Des X502 (f) —UL Des X504 (f)	UL Design X504 based on 3" hollow tile	SA-405 SA-923	2

column fireproofing

	column type	physical data construction detail	description & test no.	comments	folder reference
			4-HOUR RATED APPLICATIONS (continued)		
3	W10 x49		PYROBAR Gypsum Tile & Plaster Firepfg—2" solid or 3" hollow—⅝" gypsum sand plaster—sanded basecoat & lime putty fin recom—BMS-92 table 40 (f)		SA-405
4	W14 x228		THERMAFIBER Mineral Fireprfg—2" fireprfg around col att with ⅛" stl wire studs welded to col 24" o.c. —UL Des X202 (f)	Dry assembly; offers excellent thermal insulation for exterior columns	SA-705
			3-HOUR RATED APPLICATIONS		
5	W14 x228		Gypsum Drywall or Veneer Plaster Fireprfg—½" SHEETROCK FIRECODE "C" panels or ½" IMPERIAL FIRECODE "C" gypsum base around col—double layer over ea web face—panels screw att to 158ST5 stl studs at col corners—met corner beads—joints fin or 1/16" IMPERIAL plaster over base—UL Des X514 (f)		SA-923
6	W10 x49		Gypsum Drywall or Veneer Plaster Fireprfg—3 layers ½" SHEETROCK FIRECODE "C" panels or ½" IMPERIAL FIRECODE "C" gypsum base around col—triple layer over ea flange end—inner layers on flange face separ by 158ST5 stl studs & screw att—met beads on corners—joints fin or 1/16" IMPERIAL plaster over base—UL Des X515 (f)		SA-923
7	W10 x49		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around col att with flange clips & clinch shields 16" o.c.—UL Des X306 (f)	Dry assembly; offers excellent insulation for exterior columns	SA-705
			2-HOUR RATED APPLICATIONS		
8	W14 x228		Gypsum Drywall or Veneer Plaster Fireprfg—½" SHEETROCK FIRECODE "C" panels or ½" IMPERIAL FIRECODE "C" gypsum base around col—panels screw att to 158ST5 stl studs at col corners—met corner beads—joints fin or 1/16" IMPERIAL plaster over base—UL Des X521 (f)		SA-923
9	W10 x49		Gypsum Drywall or Veneer Plaster Fireprfg—½" SHEETROCK FIRECODE "C" panels or ½" IMPERIAL FIRECODE "C" gypsum base around col—double layer over ea flange end—double layer on flange faces separ by 158ST5 stl studs & screw att—met beads on corners—joints fin or 1/16" IMPERIAL plaster over base—UL Des X518 (f)		SA-923
10	Varies		Gypsum Drywall or Veneer Plaster Fireprfg—3 layers ½" SHEETROCK FIRECODE "C" panels or ½" IMPERIAL FIRECODE "C" gypsum base around col—triple layer over ea flange end—inner layers on flange face separ by 158ST5 stl studs & screw att—met beads on corners—joints fin or 1/16" IMPERIAL plaster over base—UL Des X524 (f)	Rating applies to tapered or constant section prefabricated metal building columns	SA-923
11	W10 x49		PYROBAR Gypsum Tile Fireprfg—2" solid or 3" hollow—unplastered—BMS-92 table 40 (f)		SA-405
12	W10 x49		THERMAFIBER Mineral Fireprfg—2½" fireprfg around col att with flange clips & clinch shields 24" o.c.—UL Des X305 (f)	Dry assembly; offers excellent thermal insulation for exterior columns	SA-705

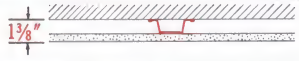
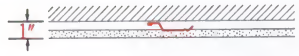
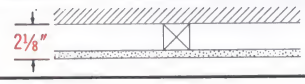
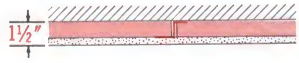
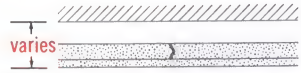
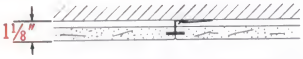
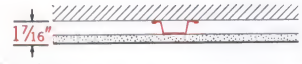
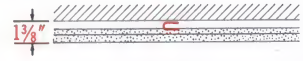
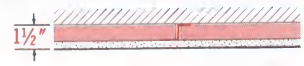
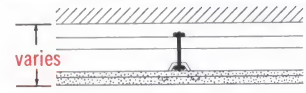
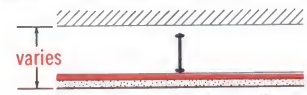
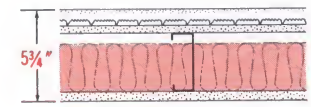
(For other tested fireproofing assemblies, see U.S.G. Technical Bulletins: CS-6 Metal-Framed Metal Lath and Plaster Systems; PM-150 Gypsum Lath Column Fireproofing.)

beam fireproofing

fire rating	beam type	physical data construction detail	description & test no.	comments	folder reference	
3 hrs. (beam only)	W8 X24		Gypsum Drywall or Veneer Plaster Caged Beam Fireprfg—158CR5 USG stl run chan brackets 24" o.c. —⅞" x 1⅜" corner angles att to brackets—3 layers ⅝" SHEETROCK FIRECODE gypsum panels or IMPERIAL FIRECODE gypsum base att with Type S screws—1" 20-ga. hex mesh on bottom over middle layer—met beads on corners—joints fin or 1/16" IMPERIAL plaster over base—2½" conc deck on fluted stl flr—UL Des N505 (f)	Extends drywall and veneer plaster use to beam protection. Fire rating for restrained assembly; 2-hr. rating for unrestrained assembly	SA-912 SA-923	13
3 hrs.	W8 X24		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around beam att with flange clips & clinch shields 12" o.c.—2½" conc deck on cellular stl flr—UL Des N304 (f)	Fire rating for restrained beam; unrestrained beam rating is 2 hrs.	SA-705	14
2 hrs. (beam only)	W8 X24		Gypsum Drywall Caged Beam Fireprfg—158CR5 USG stl run chan brackets 24" o.c.—1⅜"x⅞" corner angles att to chan brackets—dbl layer ⅝" SHEETROCK FIRECODE gypsum panels att with Type S screws—met beads on corners—joints fin—2½" conc deck on fluted stl flr—UL Des N501 (f)—UL Des N502 (f)	Design N502 based on 1⅝" steel runner for corner angles & coped brackets	SA-923	15
2 hrs.	W8 X13		THERMAFIBER Mineral Fireprfg—dbl layer 2" fireprfg around beam att with flange clips & clinch shields 16" o.c.—3¼" conc on fluted steel flr—UL Des D915 (f)	Fire rating is 1½ hrs. with cellular steel floor units	SA-705	16
2 hrs.	W8 X24		THERMAFIBER Mineral Fireprfg—2" fireprfg around beam att with flange clips & clinch shields 12" o.c.—2½" conc on fluted stl flr—UL Des N304 (f)—UL Des N305 (f)	Fire rating is 1½ hrs. with cellular steel floor units	SA-705	17

(See other System Folders Nos. SA-309, SA-905, SA-912, SA-923 and U.S.G. Technical Bulletin CS-6 for protection of beams, girders, and trusses by ceiling constructions.)

e exterior walls & furring

	physical data construction detail	description & test no.	comments	folder reference
		DRYWALL ASSEMBLIES		
1		USG Metal Furring Channels 24" o.c., ½" Foil-Back SHEETROCK Panels screw attached, U.S.G. Joint Treatment	Direct attachment by furring does not isolate surface from structural stresses. No limiting height	SA-923
2		RC-1 Furring Channels 24" o.c., ½" Foil-Back SHEETROCK Panels screw attached, U.S.G. Joint Treatment	RC-1 channel reduces transfer of structural stresses to surface membrane	SA-924
3		Wood furring strips 16" o.c., ½" Foil-Back SHEETROCK Panels, U.S.G. Joint Treatment	Surface not isolated from structural stresses; good vapor barrier	SA-924
4		1" THERMAFIBER Z-Furring Insulation, USG Z-Furring Channels appl vert 24" o.c., ½" SHEETROCK gypsum panels screw attached to channels, U.S.G. Joint Treatment	Noncombustible system with mineral fiber insulation	SA-923
5		USG Steel Studs 24" o.c., ½" Foil-Back SHEETROCK Panels screw attached, U.S.G. Joint Treatment	Free standing; allows for pipe chase clearance; good vapor barrier	SA-923
6		1" USG Gypsum Coreboard set in metal angle floor and ceiling runners, ½" SHEETROCK gypsum panels laminated to coreboard, U.S.G. Joint Treatment	Free standing; allows for pipe chase clearance; minimizes shadowing and spotting	SA-923
7		USG ¾" Z-splines appl vert 24" o.c., kerfed ULTRAWALL Gypsum Panels engage concealed spline	Provides exterior wall surfacing having same appearance as movable partitions	SA-1020
		PLASTERED ASSEMBLIES		
8		USG Metal Furring Channels 16" o.c., ½" Foil-Back IMPERIAL gypsum base screw attached, 1/16" IMPERIAL plaster finish	May be attached direct or additionally furred out on ¾" horiz. cold-rolled channels; good vapor barrier	SA-912
9		R-5 Resilient Clips 16" o.c., Foil-Back ROCKLATH plaster base and BRIDJOINT Clips, ½" sanded basecoat, lime putty finish	Resiliency of the R-5 Clip will reduce the transfer of structural stresses to surface membrane	SA-405
10		1" THERMAFIBER Z-Furring Insulation, USG Z-Furring Channels appl vert 24" o.c., ½" IMPERIAL gypsum base screw attached to channels, 1/16" IMPERIAL plaster finish	Noncombustible system with mineral fiber insulation	SA-912
11		TRUSSTEEL Studs 16" o.c. cross braced 4' o.c. on back chord, ⅜" Foil-Back ROCKLATH plaster base attached with TL-1 Clips, ½" sanded basecoat plaster, 1/16" lime putty finish	Free standing; allows for pipe chase clearance; good vapor barrier	SA-915
12		TRUSSTEEL Studs 24" o.c., RC-1 chan spaced 16" o.c. attached with ¾" Type T screws, Foil-Back IMPERIAL gypsum base attached with 1" Type S screws, 1/16" IMPERIAL plaster finish	Free standing; allows for pipe chase clearance; good vapor barrier	SA-915
		OTHER ASSEMBLIES		
13		USG Exterior Curtain Wall—358ST10 steel studs 16" o.c.—½" gypsum sheathing—self-furring metal lath—1" cement-lime stucco exterior—3" THERMAFIBER metal stud blankets between studs—⅝" Foil-Back SHEETROCK FIRECODE "C" gypsum panels or IMPERIAL FIRECODE "C" gypsum base and 1/16" IMPERIAL plaster interior—T-4851-OSU (f)	Assembly described offers 2-hour fire resistance. Systems offer wide selection of exterior and interior surfaces, utilizing conventional materials (1)	SA-805
14		THERMAFIBER Curtain Wall Insulation	Excellent insulation; good vapor barrier. Products offer fire protection up to 5 hours for aluminum spandrel facings	SA-705

(1) For data on truss-type framing used with these systems, see U.S.G. Technical Bulletin PM-149 on "TRUSSTEEL Stud Curtain Wall Systems."

title	folder reference
Plasters, Bases & Accessories — Gypsum and metal lath; gypsum partition tile; corner and casing beads, metal and plastic trim, control joints, clips, runners, steel studs, furring channels, brackets; basecoat, finish coat, high-strength veneer, gauging plasters; finishing limes; general lathing and plastering specs.	SA-917
Gypsum Panels & Accessories — Gypsum panels, coreboard; corner beads, metal and plastic trim, steel studs, channel, runners, brackets, control joint; screws and adhesives; reinforcing tape and joint compounds; erection specs for board and joint treatment.	SA-927
TEXTONE Gypsum Panels — Predecorated vinyl-faced gypsum panels and mouldings; application specs.	SA-928
Sound Control Ceilings — Mineral tile and panels; air distribution system components; acoustical space units; gypsum & asbestos ceiling board; metal accessories; installation specs.	SA-905
CDI Environmental Ceilings — Mineral tile and panels for coffered, vaulted and flat ceilings with integrated lighting and air distribution components.	SA-907
Insulation Products — Insulating and sound attenuation blankets; safing and curtain wall insulation; mineral felt fireproofing; blowing and pouring wool; values; application specs.	SA-705

title	folder reference
Asphalt Roofing Products — 235-lb. to 300-lb. strip and specialty shingles; self-sealing shingles; descriptions of 25 built-up roofing assemblies; UL label classifications; inspection and installation specs. (Western region only).	SA-710
Paint Products — Interior flats, enamels; exterior and floor paints; masonry coatings; stains, varnishes; texture finishes; sealers, primers, undercoat, block filler; epoxy and metal coatings; industrial finishes; preparation and application specs.	SA-933
KEWANEE Steel Doors & Frames — Standard and labeled steel doors, one- and three-piece frames, custom-fabricated stick systems, details and specs.	KMD-S
ACCURATE Toilet Compartments — Metal toilet compartments, urinal and entrance screens, shower cabinets, dressing enclosures, accessories, details and specs.	SA-1070
GRATE-X Gratings — Expanded metal grating for platforms and walkways; stair treads; load data; details and installation specs.	SA-505
GRIP STRUT Gratings — Reticulated metal grating for platforms and walkways; stair treads; load data and installation specs.	SA-506
GLOBE-STRUT Channel Framing — Metal channel supports for mechanical and electrical installations; surface raceways; concrete inserts; specs.	SA-1510

U.S.G. products / specification standards

The listings below contain existing Standard Specifications, classified as Federal, Army, Navy, Treasury, etc., which apply to U.S.G. materials. Where ASTM, local codes, etc. require product variance, consult your U.S.G. representative. The symbol "WC" after a product listing denotes that U.S.G. is on the government list of those companies willing to certify that their products meet that specification. See pertinent U.S.G. Product Catalog for additional information.

PRODUCT	FEDERAL SPECIFICATION	ASTM DESIGNATION
PLASTER		
RED TOP* gypsum plaster (WC)	SS-P-00402B type II	C28—gypsum neat plaster
RED TOP two-purpose plaster	SS-P-00402B type II	C28—gypsum neat plaster
RED TOP wood fiber plaster (WC)	SS-P-00402B type III	C28—gypsum wood fiber
STRUCTO-LITE* plaster	SS-P-00402B type I	C28—gypsum ready mix plaster
perlite aggregate	non-applicable	C35
RED TOP gauging plaster (WC)	SS-P-00402B type V	C28—gypsum gauging for finish coat
RED TOP keenes cement regular (WC)	SS-C-161A type I	C61
quick trowel	SS-C-161A type II	C61
STRUCTO-GAUGE* plaster	SS-P-00402B type V with added req. of dry compressive strength not less than 5000 psi (neat)	C28—gypsum gauging for finish coat
STRUCTO-BASE* plaster	SS-P-00402B type II with added req. of dry compressive strength not less than 2800 psi.	C28—gypsum neat plaster
IMPERIAL* plaster	non-applicable	C587—gypsum veneer plaster
GYPSUM LATHING		
ROCKLATH* plaster base—⅜" & ½"	SS-L-30D type I, grades R and X, class 1, forms (a) (b) and (c), styles 1 and 5	C37
IMPERIAL gypsum base—½" & ⅝"	SS-L-30D type I, grades R and X, class 1, style 1	C588
USG® R.H. base—½" & ⅝"	SS-L-30D type I, grades R and X, class 1, style 1 (in type III size)	

*Reg. U.S. Pat. & Tm. Off.

PRODUCT	FEDERAL SPECIFICATION	ASTM DESIGNATION
LIME		
RED TOP and GRAND PRIZE* finish lime	SS-L-351B type F (including added requirement of not more than 8% unhydrated oxides)	C6 type N
IVORY* finish lime		C206 type S
RED TOP masons hydrate	SS-L-351B type M (including added requirement of not more than 8% unhydrated oxides)	C207 type N
MORTASEAL* masons lime BONDCRETE* masons lime		C207 type S
RED TOP quicklime	—	C5
METAL LATHING		
Bases, metal: (for) plaster, lath and stucco constr. (WC) 3.4# galv. diamond mesh lath, 2.5# and 3.4# c.a. ptd. & poly-backed; ⅛" 4-mesh z-riblath 2.75# and 3.4#; ⅜" riblath 3.4# and 4.0#	QQ-L-101C class 3 (flat dia. mesh) class 3 (self furring dia. mesh) class 4 (⅛" flat rib) class 1 (⅜" rib)	non-applicable
Hanger wire—tie wire	QQ-W-461g finish 5 class 1 (1006 type steel)	
GYPSUM PANELS		
SHEETROCK* (plain) (foil-back)	SS-L-30D	C36
SHEETROCK sq. edge (WC)	type III grade R class 1	C36
SHEETROCK tap. edge (WC)	type III grade R class 1	C36
SHEETROCK bev. edge (WC)	type III grade R class 1	C36
⅝" SHEETROCK FIRECODE*	type III grade X class 1	C36
SHEETROCK FIRECODE "C"	type III grade X class 1	C36
TEXTONE vinyl-covered	type III grade R or X cl. 3	C36
SHEETROCK W/R water-resist.	type VII grade W or X class 2	C630

(continued)

U.S.G. products / specification standards (continued)

PRODUCT	FEDERAL SPECIFICATION	ASTM DESIGNATION
PARTITION TILE		
PYROBAR* Gypsum Tile (WC)	SS-T-316C	C52
SHEATHING		
USG gypsum sheathing	SS-L-30D type II grade W cl. 2	C79
JOINT TREATMENT		
USG & DURABOND* joint compounds	SS-J-570a type I	C474 & C475
PERF-A-TAPE* reinf. tape	SS-J-570a type II	
Compound & tape combined	SS-J-570a type III	
DRYWALL ACCESSORIES		
USG electro-galv. studs and runners, furring channels, RC-1 resilient channels	QQS-698	C645 (except resilient channels)
USG hot-dip galv. studs, runners, furring channels, RC-1 resilient channels	QQS-775d	A525 C645 (except resilient channels)
Metal corner beads and trim	QQS-775d class E	A525
USG brand screws	—	C646
DURABOND Adhesives 200, 300, Multi-Purpose	—	C557
ACOUSTICAL UNITS—PREFABRICATED		
ACOUSTONE* "F" MOTIF'D* ACOUSTONE AIRSON* ACOUSTONE AURATONE*	SS-S-118a (GSA-FSS) type III class 25	E84
METAL GRATING		
GRATE-X grating	MIL-G-18015s, MIL-M-17194c & RR-G-1602	non-applicable
GRIP STRUT grating selected styles	RR-G-1602 & MIL-G-18015s	non-applicable
INSULATION BOARDS		
USG sound deadening board wood fiber mineral fiber	LLL-I-535a class a	C208 class A noncomb. class A

PRODUCT	FEDERAL SPECIFICATION	ASTM DESIGNATION
MINERAL FIBER INSULATION		
THERMAFIBER* open face batt (membrane facing one side)	HH-I-521E type II, III	C665
blanket batt (with enveloping membranes)	HH-I-521E type II, III	C665
blowing wool	HH-I-1030a type I cl. A	none
pouring wool	HH-I-1030a type II cl. A	none
sound attenuation blanket	HH-I-521E type I	C665
THERMAFIBER safing insulation, curtain wall insulation, mineral felt fireproofing	HH-I-521E type I HH-I-558B Form A, classes 1 & 2	C665
ROOFING		
FORTIFIED* shingles	SS-S-300b type II	D225 type II
SEALCO* shingles	SS-S-300b type III	D225 type I
FIRECODE XX shingles	SS-S-294a	
USG asphalt-sat. felts	HH-R-595b type II cl. I & II	D226
USG asbestos felt	HH-R-590A type I class A	D250
ADAMANT* cap roll roofing	SS-R-630D	D249
SEL-VI-LAP* roll roofing	SS-R-630D	D371
IMPERIAL roll roofing	SS-R-501d class B	D224
SUPER-TITE* roofing asphalt standard grade	SS-A-666d type II	D312 type II

PRODUCT	FEDERAL SPECIFICATION	ASTM DESIGNATION	OTHER NATIONAL
GYPSUM ROOF DECKS			
PYROFILL* & THERMOFILL* gypsum concrete	(C.E. 219)	C317 material	ANSI A59-1
SHEETROCK formboards	SS-L-30D type V	C318 material	—
USG min. fiber formboards	SS-S-118a cl. 25	—	—
USG ¼" asbestos formboard sheets, flat	SS-B-755a type u only	—	—
USG 2" metal edge gypsum plank—precast	SS-T-315B type I	C377 type 2	—

*Reg. U.S. Pat. & Tm. Off.

NOTE: All products described here may not be available in all geographic markets. Consult your local U.S.G. sales office or representative for information.

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